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OEO SPONSORS SHRIMP FARM PROJECT

One man on campus has pollution licked. This bold and daring scientist actually utilizes the pollution!

Robert Cordover, graduate student in oceanography, uses it in a very practical manner for his extraordinary research project on Shrimp Farming.

The research is taking place on Coconut Island. The sewage that pours into Kaneohe Bay—no doubt dismaying many ecologists and swimmers—happens also to produce nutrient-rich water and algae for Bob Cordover to feed his shrimp.

Cordover was awarded an Office of Economic Opportunity government grant for research in starting a commercial shrimp industry for unemployed people on Molokai and Maui.

New Way Of Looking

Anything that's been done in shrimp production before, Cordover has abandoned or altered for an innovative, better, more economical method.

For example, shrimp are normally raised in tubs. "The algae used for their food is raised in batches and fed to them in their tubs. This takes at least six people washing and feeding and pouring algae in various containers at exactly right timing—a few hours too late and the algae loses its food value. It's an unreliable method," Cordover says.

He found a way to turn all this into an economical one-man operation by building big tanks and introducing into them 6700 gallons of

Kaneohe Bay water with the sewage outflow nutrients already in it.

Using various types of mesh, he lets in algae, but keeps out the fish and everything else that eat either algae or shrimp.

Algae goes through a whole generation in a day. So after about 10 days and 10 generations, the dominant species will hold up and become the food for the shrimp. Cordover maintains 100,000 algae cells per milliliter of water by controlling the flow rate: slow enough for the algae to reproduce itself, yet fast enough to get nutrients needed to mature the population.

"Shrimp grow so fast they outgrow algae as food sometimes with-

in a week, and then need larger-sized food," Cordover explains.

He accomplished the manufacture of larger pieces of algae for the maturing shrimp through the use of an old-fashioned farm cream separator.

Outgrowing Algae

The algae-rich water is poured into the cream separator, and the water syphoned off, allowing the algae to stick to plates, now of a peanut-butter consistency. He scrapes this off and freezes it together with a binder (such as agar). Now it is in sizeable chunks the mature shrimp can eat.

From the small culture tank, the
Continued on page 11...



Robert Cordover

EDWARD BARNET, dean of TIM, returned from his sabbatical leave in time for Christmas at home.

He has conducted seminars from one end of Bangkok to the other, including the Chulalongkorn University, Bangkok Technical Institute, and Chiangmai University.

M. RAY SMITH and HARRIS GITLIN of the agricultural engineering department attended the 1971 winter meeting of the American Society of Agricultural Engineers in Chicago last month.

Smith presented a joint paper entitled "A Pickup Mechanism for Harvesting Wetland Taro". Gitlin gave a joint paper, "A Simple Tool Holder For Three-Dimensional Force Measurement."

ALBERT TESTER, professor of zoology, will be studying such things as shark problems and modern methods of using tuna in the Pacific during his sabbatical which started this month and extends to April.

As a member of the Governor's Commission for Development of Fishing in the Trust Territories, he will try to discover modern up-to-date methods for the fishing industry there.

He will also visit Samoa, Fiji, New Caledonia, Australia, and take part in an oceanographic conference in Wellington, New Zealand.



Albert Tester

MORTON COTLAR, associate professor in business management, participated in work group discussion at the Intercollegiate Case Clearinghouse Workshop at Brigham Young U in Utah recently.

The workshop was designed to provide information to the participants regarding case writing, course development, and case teaching.

Each participant submitted a case in business practice which will be published by the Intercollegiate Case Clearinghouse.

The conference also included visits to regular classes in the BYU College of Business to observe case teaching methods.



Morton Cotlar

JAMES HARPSTRITE, assistant professor of education, was selected by the Overseas Development Council to present the Pacific and Asian Affairs High School Program on World Affairs in Washington, D. C. last month.

Twenty international educators took part in the workshop on international education and development in American high schools at the Brookings Institution.

Also, while in Washington, Harpstrite met with the director of the National Endowment of the Humanities to discuss a pending proposal for inservice education of Hawaii's teachers in the field of Asian humanities.



Michael Pearce

MICHAEL PEARCE, assistant director of E-W Technology and Development Institute, visited nine Asian cities last month, including Manila, Djakarta, Singapore, Kuala Lumpur, Bangkok, Chiangmai, Hong Kong, Taipei, and Tokyo.

The purpose of this trip was to follow up a study of the recently completed Planning Conference on Development Intreprenurship. Pearce visited many of the institutions that sent participants to the workshop, to interview prospective Fellows and staff for the East-West Center.

Also he visited additional non-metropolitan institutions which comprise the network of cooperative Asian institutions working with TDI.

C. GOPALAKRISHNAN, associate professor of tropical agriculture presented a paper, "Promoting Economic Growth Through Water Resource Development: India" at the seventh annual conference of the American Water Resources Association held in Washington recently.

The paper has also been selected for subsequent publication in the Water Resources Bulletin, a quarterly journal published by AWRA. The American Water Resources Association is the nation's foremost organization of water resource experts.



Klaus Wyrcki

Atlas Opens Sea Secrets

Even if you had lived in Indonesia, and even if you had taken part in explorations around ocean waters, and knew others who researched the Indian Ocean—still, would it occur to you to get together a whole atlas on the subject?

It did occur to Klaus Wyrcki, professor of oceanography.

He applied for the funding of such an atlas to the National Science Foundation, and was awarded the grant. After about three years of data-gathering and sorting and editing, with the assistance of former UH research associate Edward Bennett, Wyrcki completed the "Oceanographic Atlas of the International Indian Ocean Expedition."

It was printed by Rand-McNally, and copies of it are obtainable from the Superintendent of Documents, U.S. Government Printing Office in Washington.

The atlas concerns the findings of the International Indian Ocean Expedition, an expedition of intensive study of the 28 million-square-mile Indian Ocean by scientists of 28 cooperating nations working from shore stations and an extensive fleet of research vessels.

To an oceanographer, it was more fascinating than a mystery novel! The 544-page atlas contains colored maps and diagrams; provides information on water temperature, depth, density, temperature gradient, and transport, as well as the salt, oxygen, phosphate, nitrate, and silicate content of the water.

The information is based on data about the Indian Ocean contributed by the many cooperating nations, from 12,000 scientific stations (points at which research vessels made measurements), stored on about 200,000 computer cards.

LEEWARD CC PLANS INSTITUTE

"Seeking imaginative solutions for the educational problems of today and tomorrow" is the way the Leeward program arrangers described what will be happening February 15 to 19.

That's when the First Hawaii Innovations Institute Program will take place at the Princess Kaiulani Hotel, with Leeward Community College as host.

Why is the Institute important, particularly to the community colleges?

"..... to be free to experiment"

Leeward instructor John Michalski, chairman of the Institute, answered, "Since community colleges stress teaching, not research, and because of the stringent accountability, coping with programming and budgeting, we must improve methods of both teaching and administration.

"We want to be free to experi-

ment, to be innovative... which community colleges especially are...

"It is of benefit to compare notes with other colleges on a national basis. Not only instructors will take part in the Institute, but there will be editors from scholarly journals, representatives from professional organizations, book publishers, people in various capacities from UCLA, from Harvard, Miami University.

The study group topics for the Institute are wide and varied. One of the fields of concern, for instance, will be the non-punitive performance-oriented grading and teaching question.

"..... given another chance"

Michalski said about Leeward, "If a student has withdrawn from learning, he should be given another chance. He should be allowed to take the course again—after all, peo-

ple learn at different rates of speed. Leeward has dropped the F grade, we give a W instead—all done without lowering the standards. This allows a student to find himself, whereas an F might cause a halt to his education entirely."

"..... doing the same thing"

Another field in which the Institute will delve is that of the mutual non-recognition between community colleges and senior institutions. "The latter feel they are superior because of their Ph.D. programs, and the community colleges feel superior because of their concentration on good teaching.

"But we are in effect doing the same thing, our goals are the same, and during the first two years we cover practically the same areas. It's time we sat down and discussed educational matters together."

SINO Affairs

Steve Uhalley of the history department and Edward Beauchamp of Educational Foundations, established a Field Staff of the National Committee on U.S.-China Relations.

The Field Staff consists of graduate students who, with the financial support of the National Committee, provide speakers, educational materials, etcetera, in Sino-American affairs to both the local community and the public school teachers to further understanding in this field.

Cosmic Ray

Three UH physicists had a major role in the discovery of the Cosmic Ray muon flux and the W-particle.

An article in *Physics Today* magazine tells of the research project and the fact that UH's Sandip Pakvasa, San-Fu Tuan, and Walter Simmons put forth the model of the W that resulted in the analysis now made by a group of scientists at the University of Utah.



Lawrence Zane

Test Plans

Lawrence Zane, director of Education Professions Development Act Graduate Fellows, has been appointed area test coordinator for the National Occupational Competency Test Program sponsored by the U.S. Office of Education.

He attended a meeting of the Area Test Coordinators in Portland, Oregon, last month.

Ethnic Lab

Ethnic Studies courses at UH are now into their second year.

The Ethnic Studies Department covers the areas of Asian-American, Hawaiian-American, Black-American studies.

The Asian-American group is divided into three sub-groups, Japanese-, Chinese-, Filipino-, Americans. Tentative plans are to include a course on the Korean-American.

The courses are organized into both lectures and lab sessions. Students attend lectures on the historical, social, cultural, and economic background of their ethnic group, beginning with the first immigrants to Hawaii during the mid-1800's.

Hawaiian-American studies extend further into the past. Lectures are followed up with discussion labs where much of the soul-searching occurs.

Dr. Dennis Ogawa, formerly of UCLA, is Chairman of the Ethnic Studies Department.



Royal Fruehling

TV Guide

Royal Fruehling, assistant professor in Educational Foundations, is consultant for and participant in the State Department of Education's television inservice guidance series.

Television tapes for teachers and counselors of all grade levels make up the series.

They feature the personal guidance techniques in the classroom.

Tests Recycle Water

UH's Water Resources Research Center has launched a research project in water recycling by irrigation with sewage effluents at the Mililani sewage treatment plant on Oahu.

"The project should have statewide impact on the conservation of water resources and the management of wastewater," said Stephen Lau, director of the WRRC and the principal investigator for this project.

The \$68,000 study is funded by the Board of Water Supply and the City and County of Honolulu. It is divided into two companion phases.

In the first phase researchers will test irrigation of grassland and sugarcane, using secondary-treated sewage.

Lau noted that ground water furnishes more than 90 percent of Oahu's drinking water needs. So instead of discharging wastewater into

the ocean, as is usual, this irrigation will recycle and conserve water and nutrients.

The second phase of the study will monitor the effects of sewage effluent on cane growth and sugar yield.

Other UH faculty working on the project include N.C. Burbank Jr., Gordon Dugan, R.H.F. Young, environmental and sanitary engineers; P.C. Ekern, soil scientist; P.C. Loh, virologist.

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PRESS GIVES UNIQUE FIELD TRAINING

Robert Scott, director of the journalism program, has been invited to be a judge in a printing competition.

While most of us take the printed word for granted in a modern world, 151 years ago printing in Hawaii was unknown.

The Honolulu Club of Printing House Craftsmen is celebrating January 17 to 21 as "Printing Week," marking the 150th anniversary of the introduction of printing here. One of the highlights of the jubilee is a Competition for Fine Printing in which Scott will be judge.

Different in Training

"It is obvious," says Scott, "that I have been selected in recognition of the achievement of students who work or have worked at Beau Press

and subsequently distinguished themselves as designers and craftsmen and journalists."

Beau Press on Campus is a unique training field for journalism, English, and graphic arts students. It was conceived as a printing service with no professional on the staff. All personnel are undergraduates or graduate students working part-time. Moreover, there is very little supervision. The students run it themselves, learn by trial and error and pass on their knowledge to each other. The freshmen and sophomores, just starting, inherit what the seniors and graduates have learned through two or three years of experience.

"Beau Press was organized in 1965 as a small hand-set operation," Bob Scott said. "With about \$300 worth of type, a borrowed vertical



Robert Scott

platen press and lots of patience, six students and I hand-set a 48-page edition of 'Kapa' the student literary magazine. Because we had so little type, we could set only four pages at a time.

"Since 1965 we have used surplus funds donated by ASUH and equipment donated by Honolulu, Maui and Hawaii printing houses and newspapers to build a complete shop."

Beau Press now is a bouncy little printing shop, managing to print Ka Leo O Hawaii three times a week.

Abundance Of Printing Jobs

They also produce the Manoa Bulletin, the Student Directory, Manoa and Leeward Schedule of Courses, and an abundance of small printing jobs—such as departmental brochures, and newsletters, special menus and certificates for Summer Session, etcetera.

There are about 40 students employed part-time at Beau Press. Three UH students with Beau Press experience were awarded fellowships to the annual Radcliff Publishing Procedures program, the only university in the country to be so honored.

"Three of our former employees are working in publishing houses in New York City," Scott says. "Another is in similar work in Miami, one young woman is chief graphics designer in Sweden."

Two Have Seminar Role

The Association for Educational Communications and Technology (AECT) is the professional organization of thousands of educators and others whose activities are directed toward improving instruction through technology. (Technology is interpreted in terms of the learner and his relationship to the people,

events, places and things through which he learns).

At the Association's recent meeting in Washington, D.C., two UH professors were invited to take part in the leadership Seminar.

The two were Lillian Lum, associate professor, and Geoffrey Kucera, chairman, of educational communications.

Kucera and Mrs. Lum said a significant result of the intensive three-day conference was a proposal to establish a licensing procedure to be conducted by the Association. This would recognize specific professional competencies of media personnel.

Under the proposed plan, intended to implement the principle of "accountability" in one aspect of education, AECT would act in a capacity similar to that of the American Medical Association in the medical profession.

Such a program would be concerned with applying all the media of communication to learning.



Geoffrey Kucera and Lillian Lum

Faculty Action Is Iams' Concern

Ruth Iams, first woman president of the Faculty Senate, has held this awesome job now for one semester.

When asked what she felt were, at this point, the vital things the Senate should be doing, she answered:

"One of the most important issues right now is the fact of inadequate faculty participation at policy level. The Faculty Senate has too often been merely a re-acting body and this I deplore. It must be an active force.



Ruth Iams

"I certainly agree that we're all too busy, that we don't seem to have the time to devote to things other than our teaching and research. I understand the reasons, yet these problems are not unsolvable.

"Why can't professors be allowed to take half-time for teaching and half-time to work with the Senate for a year or two, with the assurance that it would carry prestige and value in promotional evaluation?

"We are anxious for the cooperative role with administration. The faculty doesn't want the role of the adversary.

"I'm devoted to the participatory-management idea that anyone who is affected by a decision should have a hand in its making. Of course the idea of participation shouldn't be approached on insignificant levels so as to make it ridiculous. But there is a certain spirit in which participation should and can be approached.

A Committee Is Working Now On A Restructured Charter

There might well be a restructuring of the whole decision-and policy-making body, a revision of the Manoa Senate Charter, Mrs. Iams believes. The Charter and Handbook Committee is working right now on a charter for restructure of the Manoa faculty governance. Peter Vlachos is chairman of this committee and James McCutcheon is vice-chairman.

"The whole East-West Center controversy is a good example of

this lack of policy-making between administration and faculty," Mrs. Iams said.

The Senate's Role Is Making Sure Of Faculty Involvement

"I see the important major issues for faculty as: a) collective bargaining and what it will do to us—the Senate has to stay out of this one, it has no role at all in this issue; b) selection of the new Chancellor—the Senate's role is to make certain there is faculty involvement in the choice; c) partition of Manoa and the statewide system, and in this the Senate should have a voice in the degree and kind of autonomy of the Manoa campus and the Chancellor... I can't recall that the faculty was ever asked if the partition of Manoa and statewide system was a good idea. But now that it seems to be happening, the faculty should be deeply involved."

English Comp Mo' Bettah Now!

English comp students now have about eight choices in a program which started last semester.

Richard Larson, professor of English and director of composition, says UH is "only one of two or three schools in the country giving students this kind of choice."

Few students like required courses, Larson stresses, so the idea of some option appeals. Not only that, it is good for the professors who have different interests, techniques, and specialties.

Besides the standard Expository Writing course, the English Comp offerings now include such things as "Language and the Visual Media", focusing on the role of language in film, TV, and advertising—ah, shades of Marshall McLuhan!

"Problem-Solving and Argument on Contemporary Issues" is also right down the contemporary alley, where students read and discuss works by Ralph Nader, Paul Goodman, Charles Reich, Rachel Carson and Paul Ehrlich.

Another alternative might be "Exposition and Autobiography," in which students examine noteworthy events in their own lives, and seek to understand their own assumptions and beliefs.

Still other choices are: "Exposition and the Study of the Past," analyzing and comparing issues in Western cultural and intellectual development; and "Studies in a Major Writer of Exposition or Argument" focusing on a single writer whose works are significant and effective.

Words, Turns Tell Peking Opera Story

Daniel Yang took a step forward. Then he took the step again, breaking it down into three separate parts, and explained each part. It was a bizarre sort of step with the heel coming up first, then the sole extended to the audience, then forward and a balancing with the other foot.

"This one step might take weeks to master," he said as he began the description of what Peking opera really is.

"Black Dragon Residence," a Peking opera, will be presented at Kennedy Theatre February 4 to 13, directed by Daniel Yang, visiting associate professor of drama from the U of Colorado.

"A Peking opera performer has to be a superb actor, singer, dancer, and acrobat," he explains. "And it takes years of intense training to be first rate."

How, then, does he train university students of the Western world to do a traditional Peking opera?

"First of all, we start rehearsals three months before the performance—it takes about five times as much time and effort as a familiar Western drama.

"..... they must learn to stand, how to walk, how to dance..."

"The actors must learn how to stand, how to walk, how to dance, move, gesture in time to the percussion orchestra, how to make up, how to dress and tie on a costume, how to place a headdress securely on the head," Yang says.

Pity the poor heroine! Leading lady Valerie Charles must, in addition to the other complexities, walk around on her tiptoes and stilts. She manipulates low stilts that are built into her shoes, so that only the



Daniel Yang discusses authentic opera costumes

miniature shoe shows, giving the impression of tiny feet. (Her own feet are bound upward into the legs of her trousers.)

"... it disavows realism in favor of a form..."

The performers also must master the Peking opera technique of singing, which is a kind of falsetto. They are even learning most of the songs in the Chinese language, although the dialogue will be in English.

Yang himself translated the "Black Dragon Residence" from the Chinese into English for performances in America. He also transferred the Chinese characters for the songs' lyrics into Roman letters to make it possible for Western students to capture the Chinese sounds.

The UH students in the cast are Caucasian, Filipino, Japanese, Hawaiian. "Everyone must start from scratch to learn the technique, and everyone must have traditional heavy makeup, so it doesn't matter too much what nationality they are. Of course I couldn't choose a person with a distinctly Roman nose or eyes that were especially deep-set, but other Western features can be made up to look Chinese."

Yang describes the Peking opera as "the national drama of China.

It disavows realism in favor of a 'form'—a fusion of song, dance and music whose constructive functions are bound by symbolism and age-old conventions.

"There is strict pattern in the movements, precision in every turn and step—the whole drama you might say is choreographed. No movement is at random, you can't take two steps today and three tomorrow. And the dance patterns are complicated, as well as exact.

"... the twist of your hand has its percussion symbol..."

"The dialogue is punctuated with percussion, so that the mere pointing of a finger, or the twist of your hand has its symbolic percussion accompaniment."

Yang brought from Taiwan the magnificent embroidered and gold-encrusted costumes, and the percussion instruments. He is training students to play the special Chinese drums, cymbals, a large gong, and small gongs.

Yang, who was born in China, acted in Peking opera and studied under professional actors there. He says: "We will try to make the production as authentically Peking opera as possible."

"Reinforcing Productive Classroom Behavior" is the title of a new teacher's guide to behavior modification written by George Fargo in collaboration with two mainland professors.

Fargo is UH associate professor of special education.

This guide provides teachers and others who work with children practical suggestions that have been validated in research studies, reflecting the contributions of many teachers, principals, psychologists and counselors.

The book contains a description of some common classroom problems and principles of behavior modification techniques to apply to them.

Richard Peterson's article, "A Test of the Permanent-Income Hypothesis of the Demand for Money Using Grouping as an Instrumental Variable" was accepted for publication by the *Journal of Political Economy*. Peterson is a professor of business administration.

Another article, "An Econometric Model of Hawaii—1951-70" was accepted for publication as an *Economic Research Center Monograph*.

Peterson has been appointed a member of the Coordinating Advisory Committee of the Economic Research Center by the director of research.



Richard Peterson



C. Robert Eddinger

Rare birds found only in Hawaii is the subject of an article by C. Robert Eddinger, science instructor at Honolulu Community College.

Eddinger's article, "Hand-Raising Hawaii's Endemic Honeycreepers" appears in Volume 71 of *Avicultural Magazine*.

The largest living species of the honeycreeper is the Kauai Akakia-*loa*, only 7.75 inches long, which Eddinger describes. The smallest is the *Anianiau* and is just 4.25 inches long.

Of the 22 species of the Hawaiian Honeycreeper, eight are extinct and another eight are considered to be in danger of extinction.

Richard Aadland, accounting instructor at Leeward Community College, has an article appearing in the November issue of *American Vocational Journal*.

Entitled "Vehicles for Occupational Updating," the article identifies kinds of industry exposure needed to help vocational educators keep current in their subject matter.

"Occupational inservice education," writes Aadland, "should be part of the teacher's regular workload."

University Press has recently released a book, "Buddhism in Hawaii, Its Impact on a Yankee Community," written by Louise Hunter, a longtime Hawaii resident.

The book deals with the problems and challenges faced by Buddhists seeking to practice their religion and its traditions in Hawaii. According to the author, the controversy over Buddhism raged in Hawaii for half a century, spring from intolerance and "willful ignorance of Buddhist beliefs and values."

Russel Taussig, Ralph Sprague, and Thomas Kimball, professors in CBA, has a joint article appearing in the September 1971 issue of "Taxes".

It was subsequently selected for reprinting by *The Monthly Digest of Tax Articles* in the December issue.

In Memoriam

Elsie Riddle Smith, associate professor of nursing, died December 2 at her home on Hunnewell Street.

Mrs. Smith joined the UH faculty in 1954. Before that she taught at universities and nursing schools in Idaho and Washington.

She was active in the Hawaii Nurses Association and was president of the Hawaii League for Nursing from 1959 to '62.

Franklin Callender, former associate executive director of the UH Research Corporation, died in a Los Angeles hospital November 24, after a long illness. He was 47.

He came to UH in 1965 as a research associate in the Hawaii Institute of Geophysics. In 1966 he assumed his Research Corporation position which he held until 1970.

appointments



Betsy Sakata

• *Betsy Sakata is the new director of courses and curricula in the College of Continuing Education.*

Mrs. Sakata was a curriculum specialist in education on the staff of the Leeward District Superintendent prior to this appointment.

She has had extensive experience in the design and implementation of innovative curriculum and staff-development programs. In her new position she administers the college's credit and non-credit courses.

• Three East-West Center Senior Fellowships have been granted to Gloria Feliciano, Vern Carroll, and Peter Naggs.

Gloria Feliciano, dean and professor of communication at the Institute of Mass Communication, U of the Philippines, will complete a book on "Communication Research in Asia," based on ten years of field work and her experience in establishing the Institute.

Vern Carroll, associate professor of anthropology at U of Washington, has conducted anthropological research in Haiti and the Trust Territory, and will compile a study of Pacific atoll populations, and will develop techniques for analysis of such populations.

Peter Naggs, professor at U of Illinois College of Law, will examine the effects of law in changing the traditional family patterns of the large non-western population of Soviet Asia as compared to other Asian countries.

• Robert Garrels has been appointed to the Captain Cook Chair of Oceanography. He will do both teaching and research here.

The Captain Cook Chair was created in 1965 to encourage marine research in Hawaii and is funded by the Honolulu Advertiser.

Garrels came to UH from Scripps Institute of Oceanography in California. He has also been on the faculty of Northwestern and Harvard.

He received his bachelor's degree from U of Michigan, and his master's and doctorate from Northwestern. He received an honorary doctorate of science from the University of Brussels, where he held the Henri Chair of Applied Science.



Milton Friedman

• A nationally known writer and economist is coming to Manoa Campus this semester.

Milton Friedman, currently the Paul Snowden Russell Distinguished Service Professor of Economics at University of Chicago, will be a visiting professor of economics here.

Friedman is also a columnist and contributing editor to Newsweek Magazine and is a research staff member of the National Bureau of Economic Research.

His professional career has included teaching positions at Columbia, Cambridge, universities of Wisconsin, Minnesota, Chicago, and California.

Friedman has also served as consultant to the Economic Cooperation Administration in Paris, and to the International Cooperation Administration in India.

• Arthur Staats has been appointed to the Advisory Committee of the National Program for Early Childhood Education.

The program, sponsored by the U.S. Office of Education, sponsors research centers at six universities.

• Maggie Lim has joined the East-West Communication Institute as an associate specialist.

A joint appointee with the UH School of Public Health, Dr. Lim will work half-time with the institute. She formerly was a fulltime associate professor of public health with UH.



Mary Gray

• Mary Gray will serve in the College of Continuing Education and Community Service as a specialist for the Study Abroad Office.

Her first "Study Abroad" was in 1955 when she and her husband took a study and camping trip through North Africa and the Near East in an old jalopy.

She taught English and psychology at the Athens College for Girls in Greece, and later joined the U.S. Information Service where she directed programs in Burma, Cambodia, India, and Taiwan.

From 1965-68, she was director of Grantee Programs for The Asia Foundation where she handled details of placement, orientation, and study guidance for Asian graduate students from 17 countries.

kudos

ERNST REESE was awarded a travel grant from the University Research Council which made it possible for him to accept an invitation to take part in the International Ethological Conference in Edinburgh, Scotland.

Reese, professor of zoology, presented a file of his work on the social behavior of coral reef fishes.

At the end of the conference, Reese was appointed one of eight U.S.A. members of the International Ethology Committee.

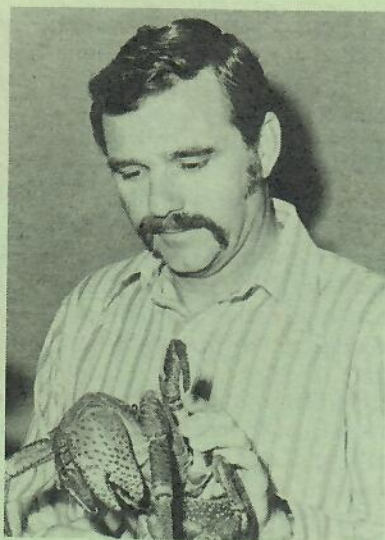
He also visited several leading labs for behavioral research in Europe—at Cambridge, Oxford, Edinburgh universities, the U of Groningen in the Netherlands, and Max Planck Institute in Germany.

ARTHUR N.L. CHIU, professor of civil engineering, has been made an honorary member of the Asian Institute of Technology Alumni Association. Chiu was on the Institute staff from 1966 to '68. The purpose of this association is to: "... establish mutually beneficial relations between the institute and its alumni, and promote the interests of the institute ..."

JAMES GILBERT, professor of horticulture, was given recognition in *Crops & Soils Magazine* by Northrup King Seeds for his role in developing vegetables with high quality, wide adaptability, and resistance to disease and insects.

The article in the August/September issue of the magazine describes some of Gilbert's research, and points out that ninety percent of the tomatoes now grown in Hawaii and Tahiti are products of his research and that of his associates in the College of Tropical Agriculture.

The article acknowledged "Dr. Gilbert for his contributions to plant development, and for his teaching work with people from as far away as Asia, Africa, and South America to help them... produce better crops...."



Ernst Reese



Arthur Chiu



James Gilbert

SEATRAN LINE recently came to the rescue of a UH department in distress.

A refrigeration unit broke down in the Food Technology building, threatening spoilage of thousands of frozen food samples.

Help came in the form of a giant-sized refrigerated Seatrain truck unit which remained on duty at the Food Technology building until the latter's refrigerator was repaired. More than one ton of frozen food was saved from ruin by this transference to the Seatrain.

PEAIRS WILSON has been elected chairman of the "Committee of Nine." Wilson is the dean of the College of Tropical Agriculture.

The Committee of Nine advises the Secretary of the U.S. Department of Agriculture on allocation of federal funds for cooperative research.

UH researchers participate in more than 20 of the national projects involving agriculture.

IT WAS CALLED "HODGE PODGE." And so it was—a fascinating artistic melange of four UH artists' work on exhibit at The Balcony Gallery in the American Savings & Loan building December 14 to January 14.

The artists are the art faculty of the UH Lab School: Val Krohn, textiles; Mirella Belshe, sculpture; Shige Yamada, ceramics and watercolor; Kathleen Kuroda, painting.

The display included exquisite three-dimensional pieces woven by Mrs. Krohn; a ceramic weed pot called Shakespearean Sonnets, with the words of the sonnets written onto the pot, by Yamada; Miss Kuroda's display of various "apple" impressions done in acrylic.

Also, there was tactile sculpture by Mrs. Belshe. Her "Anonymous as Woman" pieces "spoke" to the viewer when the viewer spoke to them. At the sound of the human voice, lights came on within the plexiglass sculpture!

Shrimp Project

... Cont'd from first page

mature shrimp go into a huge tank of 350 square feet. By ordinary means, one could keep only 350 shrimp in this space, but Cordover will take care of 50,000 shrimp here by giving each one his own condominium apartment!

He has devised a series of small vertical apartments, something like beehives, so the space from bottom to top of the tank can be utilized. With special pipes he controls water flow and air flow, and the draining off of waste material which settles on the bottom.

Help From Specialists

Cordover, in conceiving his research project step by step, often seeks a UH specialist for advice with a particular problem. "Bob Grace of the engineering department has been great about helping work out the many engineering needs of tanks and water flow. Bob Nakamura and Coy Brooks in animal sciences gave me information on shrimp so we know now what a healthy shrimp should be and what he should eat. George Balasz, expert in swine nutrition, is helping me understand shrimp nutrition. Allen Cattel, oceanographer interested in nutrients, has added to our knowledge of nutrients in algae.

World Inquiries

"Now that news of this research is getting around, I receive inquiries from all over the world... from Indonesia, South America, French Guinea, the South Pacific, and many other places. If I control the technology involved in this, I hope I can see that it goes into projects for the public good. We need to make a contribution to other people's lives."

Cordover is training one man from Molokai and one from Maui, and they in turn will take the knowledge to their islands for the start of a shrimp industry there.

SEX ROLE STUDIES OFFERED IN EXPERIMENTAL COURSES

In the future Women's Studies may not be needed... but for the time being, here are a few proposed courses on the subject of women's role and rights.



*Dorothy Stein, left,
and Doris Ladd*

One would think that after the recent rash of books and discussions on the subject of sex roles that the controversy would about be settled.

Still, a few new Women's Studies courses, wholly experimental, are being offered on Manoa campus.

Doris Ladd, assistant professor of history, will teach a new course this semester called "Sex in History."

Dorothy Stein, assistant professor of public health, who started a new course last year called "Determinance of the Status of Women," will again be teaching this course.

But this semester Dr. Ladd's and Dr. Stein's classes will overlap and combine, in part, so that the students of one will also get knowledge in the other.

The double courses will pursue an analysis of the image of women in political, economic, and intellectual history (which in the past was almost wholly written from the male

viewpoint!), and will also probe the total female experience as shaped by biological, cultural, and social forces.

Another course this spring, on an experimental basis (and if funding is assured), is a literature course which will deal with the writings by women authors and the special problems they encountered. To be taught by Marilyn Harman of the English department, the course will go into questions of whether or not women's writings exhibit a different creative attitude from those of men.

Also, if funding is found, there will be an experimental course in law and politics as related to women, which will be taught by Judith Gething, political scientist.

Assuming that women's studies achieve their aim of understanding of sex roles, special courses on women's studies would not be needed, but would dissolve into regular courses and research.

Music Prof Sets Concert

A piano recital, an added program in the music department's Faculty Series, will be presented by Malcolm Tait at 8 p.m. February 21 at Orvis Auditorium.

The pianist has programmed works by Bach, Beethoven, Brahms, Chopin and Copland.

Tait joined the music department last year as head of the music education section. Prior to this position, he was in the College of Education from 1969 to '71 where he was engaged in planning and writing materials for the Hawaii Music Project.

He is a graduate of the University

of New Zealand, and was an accomplished soloist, accompanist, and chamber music player for the New Zealand Broadcasting Corporation.

He won a New Zealand Government Scholarship with which he studied in London with Harold Craxton, and later was a member of both the Royal College of Music and the Royal Academy of Music.

Another award, the Harness Fellowship, brought him to the U.S.A. where he studied piano with Soulima Stravinsky at the University of Illinois, and gained his Doctorate in Music Education from Columbia.

Symphony Spotlights UH Music

When the Honolulu Symphony Orchestra came to Kennedy Theatre last month under a new grant from National Foundation on the Arts, four music department faculty members were featured.

Given its world premiere at this concert was Allen Trubitt's "Symphony 1964." Trubitt is the chairman of the music department. His Symphony 1964 was his doctoral dissertation at Indiana University.

Elizabeth Cole, beautiful soprano, sang three popular operatic arias: "Ritorna Vincitor" from Verdi's Aida, "L'Altro Notte in Fondo al Mare" from Boito's Mefistofele, and the "Jewel Song" from Gounod's Faust.

Two movements from Armand Russell's "Kawili" Percussion Concerto were performed, also. This concerto, which utilizes instruments of various Asian and Pacific cultures, was premiered by the Honolulu Symphony in October.

The percussion section is headed by Lois Russell, UH instructor in percussion.

An important educational part of the Symphony's coming to the campus was the open rehearsals which preceded the concert. A reading was given to UH professor Lewis Rowell's "Chorale Partita."



Pianist Malcolm Tait